



PCT10

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/048,046

DATE: 02/13/2002

TIME: 07:44:32

Input Set : A:\Wst97us1.app
 Output Set: N:\CRF3\02132002\J048046.raw

ENTERED

3 <110> APPLICANT: The Wistar Institute of Anatomy & Biology
 4 Halazonetis, Thanos
 5 Scolnick, Daniel
 7 <120> TITLE OF INVENTION: Compositions and Methods to Enhance Sensitivity of
 8 Cancer Cells to Mitotic Stress
 10 <130> FILE REFERENCE: WST97APCT
 C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/048,046
 C--> 13 <141> CURRENT FILING DATE: 2002-01-18
 15 <150> PRIOR APPLICATION NUMBER: 60/146,194
 16 <151> PRIOR FILING DATE: 1999-07-29
 18 <160> NUMBER OF SEQ ID NOS: 32
 20 <170> SOFTWARE: PatentIn Ver. 2.1
 22 <210> SEQ ID NO: 1
 23 <211> LENGTH: 2679
 24 <212> TYPE: DNA
 25 <213> ORGANISM: Homo sapiens
 27 <220> FEATURE:
 28 <221> NAME/KEY: CDS
 29 <222> LOCATION: (91)..(2082)
 31 <400> SEQUENCE: 1
 32 aagaattccg cacgaggccg caatgtctct tgacagcggc ggcggcgcaag ccggttccgg 60
 34 gttcggcgcg gggcgggat gtgaatcccg atg gag cgg ccc gag gaa ggc aag 114
 35 Met Glu Arg Pro Glu Glu Gly Lys
 36 1 5
 38 cag tcg ccg ccg cag ccc tgg gga cgg ctc ctg cgt ctg ggc gcg 162
 39 Gln Ser Pro Pro Pro Gln Pro Trp Gly Arg Leu Leu Arg Leu Gly Ala
 40 10 15 20
 42 qaq qaq qgc gag ccg cac gtc ctc ctg agt aag cgg gag tgg acc atc 210
 43 Glu Glu Gly Glu Pro His Val Leu Leu Arg Lys Arg Glu Trp Thr Ile
 44 25 30 35 40
 46 gqg cgg aga cga ggt tgc gac ctt tcc ccc agc aat aaa ctg gtc 258
 47 Gly Arg Arg Arg Gly Cys Asp Leu Ser Phe Pro Ser Asn Lys Leu Val
 48 45 50 55
 50 tct gga gat cac tgt aga att gta gtg gat gaa aaa tca ggt cag gtq 306
 51 Ser Gly Asp His Cys Arg Ile Val Val Asp Glu Lys Ser Glu Gln Val
 52 60 65 70
 54 aca ctg gaa gat acc agc acc aqt gga aca gtg att aac aaq ctq aaq 354
 55 Thr Leu Glu Asp Thr Ser Thr Gly Thr Val Ile Asn Lys Leu Lys
 56 75 80 85
 58 qtq qtt aag aag cag aca tgc cct tta cag act ggg qat gtc atc tac 402
 59 Val Val Lys Lys Gln Thr Cys Pro Leu Gin Thr Gly Asp Val Ile Tyr
 60 90 95 100
 62 ttg gtq tac agg aag aat gaa ccg gaa cac aac gtg gca tac ctc tat 450

RAW SEQUENCE LISTING

DATE: 02/13/2002

PATENT APPLICATION: US/10/048,046

FILED: 07/14/02

Input Set : A:\Wst97us1.app

Output Set: N:\CRF3\02132002\J048046.raw

63	Leu	Val	Tyr	Arg	Lys	Asn	Glu	Pro	Glu	His	Asn	Val	Ala	Tyr	Leu	Tyr	
64	105						110					115				120	
66	gaa	tct	tta	agt	gaa	aag	caa	ggc	atg	aca	caa	gaa	tcc	ttt	gaa	gct	498
67	Glu	Ser	Leu	Ser	Glu	Lys	Gln	Gly	Met	Thr	Gln	Glu	Ser	Phe	Glu	Ala	
68							125					130				135	
70	aac	aag	gaa	aat	gtg	ttc	cat	ggg	acc	aaa	gat	acc	tca	ggt	gca	ggt	546
71	Asn	Lys	Glu	Asn	Val	Phe	His	Gly	Thr	Lys	Asp	Thr	Ser	Gly	Ala	Gly	
72							140					145				150	
71	gca	ggg	cga	ggg	gcc	gat	ccc	ggg	gtc	cct	ccg	tgc	tcg	ccc	ggc	act	594
75	Ala	Gly	Arg	Gly	Ala	Asp	Pro	Arg	Val	Pro	Pro	Ser	Ser	Pro	Pro	Ala	Thr
76							155					160				165	
78	cag	gtg	tgc	ttt	gag	gaa	cca	caq	cca	tca	aca	tgc	acg	tca	gac	ctc	642
79	Gln	Val	Cys	Phe	Glu	Glu	Pro	Gln	Pro	Ser	Thr	Ser	Thr	Ser	Asp	Leu	
80							170					175				180	
82	ttc	ccc	aca	gcc	tcg	gcc	tct	tcc	acg	gag	cct	tct	cct	gca	ggg	cga	690
83	Phe	Pro	Thr	Ala	Ser	Ala	Ser	Ser	Thr	Glu	Pro	Ser	Pro	Ala	Gly	Arg	
84							185					190				195	
86	gag	cgt	tcc	tcc	agt	tgt	ggg	tct	ggg	gat	ggt	gyc	atc	tcc	cct	aaa	738
87	Glu	Arg	Ser	Ser	Ser	Cys	Gly	Ser	Gly	Gly	Gly	Ile	Ser	Pro	Lys		
88							205					210				215	
90	gga	agt	ggg	ccc	tct	gtg	gca	agt	gat	gaa	gtc	tcc	acg	ttt	gcc	tca	786
91	Gly	Ser	Gly	Pro	Ser	Val	Ala	Ser	Asp	Glu	Val	Ser	Ser	Phe	Ala	Ser	
92							220					225				230	
94	gct	ctc	cca	gac	aga	aag	act	gcg	tcc	ttt	tgc	tgc	ttg	gaa	ccc	cag	834
95	Ala	Leu	Pro	Asp	Arg	Lys	Thr	Ala	Ser	Phe	Ser	Ser	Leu	Glu	Pro	Gln	
96							235					240				245	
98	gat	cag	gag	gat	ttg	gag	ccc	gtg	aag	aag	aaa	atg	aga	gga	gat	ggg	882
99	Asp	Gln	Glu	Asp	Leu	Glu	Pro	Val	Lys	Lys	Lys	Met	Arg	Gly	Asp	Gly	
100							250					255				260	
102	gac	ctt	gac	ctg	aac	ggg	cag	ttg	ttg	gtc	gca	caa	ccg	cgt	aga	aat	930
103	Asp	Leu	Asp	Leu	Asn	Gly	Gln	Leu	Leu	Val	Ala	Gln	Pro	Arg	Arg	Asn	
104							265					270				275	
106	gcc	caa	acc	gtc	cac	gag	gac	gtc	aga	gca	gcg	gct	ggg	aag	cca	gac	978
107	Ala	Gln	Thr	Val	His	Glu	Asp	Val	Arg	Ala	Ala	Ala	Gly	Lys	Pro	Asp	
108							285					290				295	
110	aag	atg	gag	gag	acg	ctg	aca	tgc	atc	atc	tgc	cag	gac	ctg	ctg	cac	1026
111	Lys	Met	Glu	Glu	Thr	Leu	Thr	Cys	Ile	Ile	Cys	Gln	Asp	Leu	Leu	His	
112							300					305				310	
114	gac	tgc	gtg	agt	ttg	cag	ccc	tgc	atg	cac	acg	ttc	tgc	gcg	gct	tgc	1074
115	Asp	Cys	Val	Ser	Leu	Gln	Pro	Cys	Met	His	Thr	Phe	Cys	Ala	Ala	Cys	
116							315					320				325	
118	tac	tgc	ggc	tgg	atg	gag	cgc	tgc	tcc	ctg	tgt	cct	acc	tgc	cgc	tgt	1122
119	Tyr	Ser	Gly	Trp	Met	Glu	Arg	Ser	Ser	Leu	Cys	Pro	Thr	Cys	Arg	Cys	
120							330					335				340	
122	ccc	gtg	gag	ccg	atc	tgt	aaa	aac	cac	atc	ttc	aac	atc	gtg	gaa		1170
123	Pro	Val	Glu	Arg	Ile	Cys	Lys	Asn	His	Ile	Leu	Asn	Asn	Leu	Glu		
124							345					350				355	
126	gca	tac	ctc	atc	cag	cat	cca	qac	aaq	agt	cgc	agt	gaa	gaa	gat	gtg	1218
127	Ala	Tyr	Leu	Ile	Gln	His	Pro	Asp	Lys	Ser	Arg	Ser	Glu	Glu	Asp	Val	

RAW SEQUENCE LISTING

DATE: 02/13/2002

SEQUENCE LISTING NO. US/10/018,046

FILED: 02/13/2002

Input Set : A:\Wst97us1.app

Output Set: N:\CRF3\02132002\J048046.raw

128	365	370	375	
130	caa agt atg gat gcc agg aat aaa atc act caa gac atg ctg cag ccc			1266
131	Gln Ser Met Asp Ala Arg Asn Lys Ile Thr Gln Asp Met Leu Gln Pro			
132	380	385	390	
134	aaa gtc agg cgg tct ttt tct gat gaa gaa ggg agt tca gag gac ctg			1314
135	Lys Val Arg Arg Ser Phe Ser Asp Glu Glu Gly Ser Ser Glu Asp Leu			
136	395	400	405	
138	ctg gag ctg tca gac gtt gac agt gag tcc tca gac att agc cag cca			1362
139	Leu Glu Leu Ser Asp Val Asp Ser Glu Ser Ser Asp Ile Ser Gln Pro			
140	410	415	420	
142	tac gtc gtg tgc cgg cag tgt cct gag tac aga agg cag cgc gcg cag			1410
143	Tyr Val Val Cys Arg Gln Cys Pro Glu Tyr Arg Arg Gln Ala Ala Gln			
144	425	430	435	440
146	cct ccc cac tgc cca gca ccc gag ggc gag cca gga gcc cca cag gcc			1458
147	Pro Pro His Cys Pro Ala Pro Glu Gly Glu Pro Gly Ala Pro Gln Ala			
148	445	450	455	
150	ctg ggg gat gca ccc tcc acg tcc gtc agc ctg acg aca gca gtc cag			1506
151	Leu Gly Asp Ala Pro Ser Thr Ser Val Ser Leu Thr Thr Ala Val Gln			
152	460	465	470	
154	gat tac gtg tgc ect ctg caa gga agc cac gcc ctg tgc acc tgc tgc			1554
155	Asp Tyr Val Cys Pro Leu Gln Gly Ser His Ala Leu Cys Thr Cys Cys			
156	475	480	485	
158	ttc cag ccc atg ccc gac cgg aga gcg gag cgc gag cag gac ccg cgt			1602
159	Phe Gln Pro Met Pro Asp Arg Arg Ala Glu Arg Glu Gln Asp Pro Arg			
160	490	495	500	
162	gtc gcc cct cag cag tgt gcg gtc tgc ctg cag cct ttc tgc cac ctg			1650
163	Val Ala Pro Gln Gln Cys Ala Val Cys Leu Gln Pro Phe Cys His Leu			
164	505	510	515	520
166	tac tgg ggc tgc acc cgg acc ggc tgc tac ggc tgc ctg gcc ccg ttt			1698
167	Tyr Trp Gly Cys Thr Arg Thr Gly Cys Tyr Gly Cys Leu Ala Pro Phe			
168	525	530	535	
170	tgt gag ctc aac ctg ggt gac aag tgt ctg gac ggc gtg ctg aac aac			1746
171	Cys Glu Leu Asn Leu Gly Asp Lys Cys Leu Asp Gly Val Leu Asn Asn			
172	540	545	550	
174	aac agc tac gag tca gac atc ctg aag aat tac ctg gca acc aga ggt			1794
175	Asn Ser Tyr Glu Ser Asp Ile Leu Lys Asn Tyr Leu Ala Thr Arg Gly			
176	555	560	565	
178	tty aca tgg ddd ddc dtg ttg acc gag agc ctc gty gct ctc cag cgg			1842
179	Leu Thr Trp Lys Asn Met Leu Thr Glu Ser Leu Val Ala Leu Gln Arg			
180	570	575	580	
182	gga gtg ttt ctg ctg tct gat tac aga gtc acg gga gac acc gtt ctg			1890
183	Gly Val Phe Leu Leu Ser Asp Tyr Arg Val Thr Gly Asp Thr Val Leu			
184	585	590	595	600
186	tgt tac tgc tqt qqc ctq cqc agc ttc cgt qaq ctq acc tat cag tat			1938
187	Cys Tyr Cys Cys Gly Leu Arg Ser Phe Arg Glu Leu Thr Tyr Gln Tyr			
188	605	610	615	
190	cgg cag aac att cct gct tcc gag ttg cca gtg gcc gta aca tcc cgt			1986
191	Arg Gln Asn Ile Pro Ala Ser Glu Leu Pro Val Ala Val Thr Ser Arg			
192	620	625	630	

RAW SEQUENCE LISTING

DATE: 02/13/2002

SEARCHED AIRMAIL: US/10/048, 046

11441-07, File 2

Input Set : A:\Wst97us1.app

Output Set: N:\CRF3\02132002\J048046.raw

194 cct gac tgc tac tgg ggc cgt aac tgc cgc act cag gtg aaa gct cac 2034
 195 Pro Asp Cys Tyr Trp Gly Arg Asn Cys Arg Thr Gln Val Lys Ala His
 196 635 640 645
 198 cac gcc atg aaa ttc aat cat atc tgt gaa cag aca agg ttc aaa aac 2082
 199 His Ala Met Lys Phe Asn His Ile Cys Glu Gln Thr Arg Phe Lys Asn
 200 650 655 660
 202 taagcatcca gaggccctga gcagcttca gcactggagg tgaagagagc gtgttttaa 2142
 204 aatacagaga caagcaegtc aagggtttt cacagcccc tgagggaaagg gacgcagggt 2202
 206 ctcccgacagg tgcctctgggg tgaactttctt gtggagctt ttaccctctg agtgagaccc 2262
 208 ccggggggcc gcageccccc ctcctgtga gcqctggqca qqqcttgtqq 2322
 210 tggcatcage agcagagacg aagectttctt gtaacatgcg gccgtccccc cgagaggqcc 2382
 212 agttttgctc ttttgtacat ttccgaaac tacagttaaa gcagaagtct gttttcagga 2442
 214 aaagttcaa gggagaaggg caagtttac aaaaacattt ttcaggaga agggagcata 2502
 216 agtttacagc ctacaggacg tacacaatat cctgctgctg gaaaaaccac agcattttat 2562
 218 ctatTTTTTA tttaatagg ttgggtgett attttcta aagatttaaa tgcacaaac 2622
 220 tggtagcacaa ataataataat ttataattt caaattqaca aaaaaaaaaa aaaaaaaaa 2679
 223 <210> SEQ ID NO: 2
 224 <211> LENGTH: 664
 225 <212> TYPE: PRT
 226 <213> ORGANISM: Homo sapiens
 228 <400> SEQUENCE: 2
 229 Met Glu Arg Pro Glu Glu Gly Lys Gln Ser Pro Pro Pro Gln Pro Trp
 230 1 5 10 15
 232 Gly Arg Leu Leu Arg Leu Gly Ala Glu Glu Gly Glu Pro His Val Leu
 233 20 25 30
 235 Leu Arg Lys Arg Glu Trp Thr Ile Gly Arg Arg Arg Gly Cys Asp Leu
 236 35 40 45
 238 Ser Phe Pro Ser Asn Lys Leu Val Ser Gly Asp His Cys Arg Ile Val
 239 50 55 60
 241 Val Asp Glu Lys Ser Gly Gln Val Thr Leu Glu Asp Thr Ser Thr Ser
 242 65 70 75 80
 244 Gly Thr Val Ile Asn Lys Leu Lys Val Val Lys Lys Gln Thr Cys Pro
 245 85 90 95
 247 Leu Gln Thr Gly Asp Val Ile Tyr Leu Val Tyr Arg Lys Asn Glu Pro
 248 100 105 110
 250 Glu His Asn Val Ala Tyr Leu Tyr Glu Ser Leu Ser Glu Lys Gln Gly
 251 115 120 125
 253 Met Thr Gln Glu Ser Phe Glu Ala Asn Lys Glu Asn Val Phe His Gly
 254 130 135 140
 256 Thr Lys Asp Thr Ser Gly Ala Gly Ala Gly Arg Gly Ala Asp Pro Arg
 257 145 150 155 160
 259 Val Pro Pro Ser Ser Pro Ala Thr Gln Val Cys Phe Glu Glu Pro Gln
 260 165 170 175
 262 Pro Ser Thr Ser Thr Ser Asp Ile Phe Pro Thr Ala Ser Ala Ser Ser
 263 180 185 190
 265 Thr Glu Pro Ser Pro Ala Gly Arg Glu Arg Ser Ser Ser Cys Gly Ser
 266 195 200 205
 268 Gly Gly Gly Gly Ile Ser Pro Lys Gly Ser Gly Pro Ser Val Ala Ser
 269 210 215 220

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/048,046

DATE: 02/13/2002

FILING DATE: 02/13/2002

Input Set : A:\Wst97us1.app

Output Set: N:\CRF3\02132002\J048046.raw

271 Asp Glu Val Ser Ser Phe Ala Ser Ala Leu Pro Asp Arg Lys Thr Ala
 272 225 230 235 240
 274 Ser Phe Ser Ser Leu Glu Pro Gln Asp Gln Glu Asp Leu Glu Pro Val
 275 245 250 255
 277 Lys Lys Lys Met Arg Gly Asp Gly Asp Leu Asp Leu Asn Gly Gln Leu
 278 260 265 270
 280 Leu Val Ala Gln Pro Arg Arg Asn Ala Gln Thr Val His Glu Asp Val
 281 275 280 285
 283 Arg Ala Ala Ala Gly Lys Pro Asp Lys Met Glu Glu Thr Leu Thr Cys
 284 290 295 300
 286 Ile Ile Cys Gln Asp Leu Leu His Asp Cys Val Ser Leu Gln Pro Cys
 287 305 310 315 320
 289 Met His Thr Phe Cys Ala Ala Cys Tyr Ser Gly Trp Met Glu Arg Ser
 290 325 330 335
 292 Ser Leu Cys Pro Thr Cys Arg Cys Pro Val Glu Arg Ile Cys Lys Asn
 293 340 345 350
 295 His Ile Leu Asn Asn Leu Val Glu Ala Tyr Leu Ile Gln His Pro Asp
 296 355 360 365
 298 Lys Ser Arg Ser Glu Glu Asp Val Gln Ser Met Asp Ala Arg Asn Lys
 299 370 375 380
 301 Ile Thr Gln Asp Met Leu Gln Pro Lys Val Arg Arg Ser Phe Ser Asp
 302 385 390 395 400
 304 Glu Glu Gly Ser Ser Glu Asp Leu Leu Glu Leu Ser Asp Val Asp Ser
 305 405 410 415
 307 Glu Ser Ser Asp Ile Ser Gln Pro Tyr Val Val Cys Arg Gln Cys Pro
 308 420 425 430
 310 Glu Tyr Arg Arg Gln Ala Ala Gln Pro Pro His Cys Pro Ala Pro Glu
 311 435 440 445
 313 Gly Glu Pro Gly Ala Pro Gln Ala Leu Gly Asp Ala Pro Ser Thr Ser
 314 450 455 460
 316 Val Ser Leu Thr Thr Ala Val Gln Asp Tyr Val Cys Pro Leu Gln Gly
 317 465 470 475 480
 319 Ser His Ala Leu Cys Thr Cys Cys Phe Gln Pro Met Pro Asp Arg Arg
 320 485 490 495
 322 Ala Glu Arg Glu Gln Asp Pro Arg Val Ala Pro Gln Gln Cys Ala Val
 323 500 505 510
 325 Cys Leu Gln Pro Phe Cys His Leu Tyr Trp Gly Cys Thr Arg Thr Gly
 326 515 520 525
 328 Cys Tyr Gly Cys Leu Ala Pro Phe Cys Glu Leu Asn Leu Gly Asp Lys
 329 530 535 540
 331 Cys Leu Asp Gly Val Leu Asn Asn Asn Ser Tyr Glu Ser Asp Ile Leu
 332 545 550 555 560
 334 Lys Asn Tyr Leu Ala Thr Arg Gly Leu Thr Trp Lys Asn Met Leu Thr
 335 565 570 575
 337 Glu Ser Ile Val Ala Leu Gln Arg Gly Val Phe Leu Leu Ser Asp Tyr
 338 580 585 590
 340 Arg Val Thr Gly Asp Thr Val Leu Cys Tyr Cys Cys Gly Leu Arg Ser
 341 595 600 605
 343 Phe Arg Glu Leu Thr Tyr Gln Tyr Arg Gln Asn Ile Pro Ala Ser Glu

VERIFICATION SUMMARY

INPUT APPLICATION: US/10/048,046

DATE: 02/13/2002

TIME: 07:11:33

Input Set : A:\Wst97us1.app

Output Set: N:\CRF3\02132002\J048046.raw

L:12 M:270 C: Current Application Number differs, Replaced Application Number

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date